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AMENDMENTS TO THE CLAIMS

Please cancel Claims 2 and 4; and, amend Claims 1, 3 and 5 as follows.

LISTING OF CLAIMS

1. (currently amended) An automotive air-conditioner comprising:

an evaporator for cooling air to be supplied to a passenger compartment;

a heater for heating air to be supplied to the passenger compartment;

an air-mixing door for mixing the air cooled by the evaporator with the air heated by the heater; and

a controller for controlling the evaporator, the heater and the air mixing door, the controller comprising:

means for operating the air-conditioner in a cooling mode in which the air mixing door is fully closed and temperature of the air to be supplied to the passenger compartment is controlled by controlling a cooling ability of the evaporator;

means for operating the air-conditioner in a heating mode in which the air-mixing door is fully opened and temperature of the air to be supplied to the passenger compartment is controlled by controlling a heating ability of the heater;

means for operating the air-conditioner in an air-mixing mode in which the cooling ability of the evaporator and the heating ability of the heater are controlled while controlling positions of the air-mixing door; and

means for selecting either one of the cooling mode, the heating mode or the air-mixing mode; wherein

when an operating mode of the air-conditioner is switched to the cooling mode from either the heating mode or the air-mixing mode, the positions of the air-mixing door are controlled to gradually increase an amount of the cooled air to be supplied to the passenger compartment to avoid an abrupt temperature drop due to a delay of the evaporator responding to the mode switching; and

the positions of the air-mixing door are controlled to gradually increase the amount of the cooled air to be supplied to the passenger compartment until an absolute value of a difference between a target temperature and an actual temperature of the air cooled by the evaporator becomes smaller than a predetermined value that is a positive non-zero value.

2. (cancelled)

3. (currently amended) An automotive air-conditioner comprising:

an evaporator for cooling air to be supplied to a passenger compartment;

a heater for heating air to be supplied to the passenger compartment;

an air-mixing door for mixing the air cooled by the evaporator with the air heated by the heater; and

a controller for controlling the evaporator, the heater and the air mixing door, the controller comprising:

means for operating the air-conditioner in a cooling mode in which the air-mixing door is fully closed and temperature of the air to be supplied to the passenger compartment is controlled by controlling a cooling ability of the evaporator;

means for controlling the air-conditioner in a heating mode in which the air-mixing door is fully opened and temperature of the air to be supplied to the passenger compartment is controlled by controlling a heating ability of the heater;

means for operating the air-conditioner in an air-mixing mode in which the cooling ability of the evaporator and the heating ability of the heater are controlled while controlling positions of the air-mixing door; and

means for selecting either one of the cooling mode, the heating mode or the air-mixing mode; wherein

when an operating mode of the air-conditioner is switched to the heating mode from either the cooling mode or the air-mixing mode, the positions of the air-mixing door are controlled to gradually increase an amount of the heated air to be supplied to the pressure compartment to avoid an abrupt temperature rise due to a delay of the heater responding to the mode switching; and

the positions of the air-mixing door are controlled to gradually increase the amount of the heated air to be supplied to the passenger compartment until an absolute value of a difference between a target temperature and an actual temperature of the air heated by the heater becomes smaller than a predetermined value that is a positive non-zero value.

4. (cancelled)

5. (currently amended) The automotive air-conditioner as in claim [[4]] 3, wherein:

the target temperature of the air heated by the heater is represented by a target temperature of hot water circulating the heater, and the actual temperature of the air heated by the heater is represented by a temperature of the hot water actually detected.

6. (original) The automotive air-conditioner as in claim 1, wherein:

the evaporator is a heat exchanger disposed at a low pressure side of a vapor-compression-type refrigeration circuit that includes a compressor driven by an electric motor; and

the heater is a heating device through which hot water heated by an electric heater circulates.

7. (original) The automotive air-conditioner as in claim 3, wherein:

the evaporator is a heat exchanger disposed at a low pressure side of a vapor-compression-type refrigeration circuit that includes a compressor driven by an electric motor; and

the heater is a heating device through which hot water heated by an electric heater circulates.

8. (previously presented) The automotive air-conditioner as in claim 1, wherein the heater is an electric heater.

9. (previously presented) The automotive air-conditioner as in claim 3, wherein the heater is an electric heater.

10. (previously presented) An automotive air-conditioner comprising:

an evaporator for cooling air to be supplied to a passenger compartment;

a heater for heating air to be supplied to the passenger compartment;

an air-mixing door for mixing the air cooled by the evaporator with the air heated by the heater to thereby control temperature of the air to be supplied to the passenger compartment;

means for operating the air-conditioner in a cooling mode in which temperature of the air to be supplied to the passenger compartment is controlled by controlling a cooling ability of the evaporator, a heating mode in which temperature of the air to be supplied to the passenger compartment is controlled by controlling a heating ability of the heater, or an air-mixing mode in which temperature of the air to be supplied to the passenger compartment is controlled by controlling positions of an air-mixing door; and

means for controlling the positions of the air-mixing door to gradually increase an amount of the cooled air to be supplied to the passenger compartment when the operating mode of the air-conditioner is switched to the cooling mode from either the heating mode or the air-mixing mode until an absolute value of a difference between a target temperature and an actual temperature of the air cooled by the evaporator becomes smaller than a predetermined value greater than zero.

11. (previously presented) An automotive air-conditioner comprising:

an evaporator for cooling air to be supplied to a passenger compartment;

a heater for heating air to be supplied to the passenger compartment; and

an air-mixing door for mixing the air cooled by the evaporator with the air heated by the heater to thereby control temperature of the air to be supplied to the passenger compartment;

means for operating the air-conditioner in a cooling mode in which temperature of the air to be supplied to the passenger compartment is controlled by controlling a cooling ability of the evaporator, a heating mode in which temperature of the air to be supplied to the passenger compartment is controlled by controlling a heating ability of the heater, or an air-mixing mode in which temperature of the air to be supplied to the passenger compartment is controlled by controlling positions of an air-mixing door; and

means for controlling the positions of the air-mixing door to gradually increase an amount of the heated air to be supplied to the passenger compartment when the operating mode of the air-conditioner is switched to the heating mode from either the cooling mode or the air-mixing mode to gradually increase the amount of the heated air until an absolute value of a difference between a target temperature and an actual temperature of the air heated by the heater becomes smaller than a predetermined value greater than zero.